



firemen | hurried | to | places | their
The |
when
chief | gave | signal
the | the

SAMPLE LESSON

Seventh Grade



CALVERT
EDUCATION

Experience a Day as a Calvert School Home Teacher and Student

A Calvert-designed school day is exciting, challenging but not overwhelming, and structured to optimize success. Calvert's professionally compiled lessons allow you to focus your attention on your student. With the exception of Math and Technology, the lessons are all in one Lesson Manual that includes easy-to-follow, step-by-step instructions. You teach using a mix of motivating questions, discussion guides, engaging activities, review lessons, experiments, and enrichment activities—as well as maps, graphic organizers, and related reading materials. The pages that follow show you the instruction for 1 day and the Calvert-published materials used in that day's lesson.

SUGGESTED DAILY SCHEDULE

The course is planned for a normal school year of about 9 months, but some students may need more time. There are 160 numbered lessons, divided into twenty-lesson sets. Within each set of twenty lessons are two Review Lessons. Tests appear every twentieth lesson (Test Lesson 20, 40, 60, etc.). The length of time devoted to reviews and tests should be adjusted to meet the individual student's requirements. We encourage you to adapt the pace to the individual needs of your student. This is a suggested schedule for a morning of about 4 hours. Your family is free to observe holidays and vacations at chosen times, and you may start the course at any time in the year.

We suggest a schedule for your student's day so that tasks are varied and stimulating. The typical student in the Seventh Grade should spend the full 4 hours on each day's work, with an additional hour of study time in the afternoon. The student should spend no more time on the lessons than is necessary to complete the work satisfactorily.

Most students will complete an entire lesson each day. Because of the integration of lessons, we strongly suggest that you study subjects in the scheduled order without omissions; however, you may change the order of the subjects to meet the student's individual needs. Your student will develop computer skills through Technology lessons that are integrated with other subjects.

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
9:00 – 9:50	Calvert Math				
9:50 – 10:20	Science	Grammar			
10:20 – 11:00	History or Geography	Art History	History or Geography		
11:00 – 11:20	Recess				
11:20 – 12:00	Composition	Art	Science	Composition	
12:00 – 12:40	Reading			Science	Reading
12:40 – 1:00	Spelling				

An Introduction to a Sample Lesson

Calvert's unique Lesson Manuals help guide you through every day of home schooling by providing a recommended timetable and schedule. In Seventh Grade, the lesson instruction is addressed to the student. The next few pages will familiarize you with our Lesson Manual format.



SAMPLE LESSON 23

Shown on the following pages is Lesson 23 from our Seventh Grade Lesson Manual. The introductory page of the lesson lists all the necessary materials for the day, as well as all student assignments and relevant textbook materials and other Calvert products that the student will use. Our Math course, for example, uses a different Lesson Manual to ensure greater flexibility to complement your child's needs and abilities. Additionally, Spelling activities and lessons can be found on our new Calvert Mastery Series CD. Within the sample lesson, you will find blue-circled letters that refer to examples of selected Calvert-published materials that we have included in this brochure.

The lesson instruction begins on this introductory page as well. You may approach the lessons in whatever order you prefer, although they are organized to match the Suggested Daily Schedule, found on page 2 of this brochure. Each lesson proceeds step-by-step and the subjects are integrated together as often as possible to help your student retain information. Composition assignments often incorporate topics covered in other subjects, for example.

Work through the different subjects with your student at a pace that is comfortable for both of you. Notice that each lesson offers a different group of subjects. Lesson 23 is the third day in a 5-day cycle, meaning that it features a full day of Calvert Math, Grammar, Geography, Science, Reading, and Spelling.

Materials

Geography Notebook
Science Notebook
small can with the top removed
nail
hammer
long and short strings
Spelling Notebook
Spelling 7 CD (Optional)

Books

Language
Geography
EPS
Around the World in Eighty Days
Spelling

Student Assignments

❑ MATHEMATICS

❑ GRAMMAR

___ Read pp. 475–478, *Language*
___ Complete **Exercises 12 and 13**, pp. 476–479, *Language*
___ Complete **Review E**, pp. 479–480, *Language*

❑ GEOGRAPHY

___ Read pp. 104–109, *Geography*
___ Read pp. 115–122, *Geography*
___ Complete **Section 1 Assessment**, p. 122, *Geography*

❑ SCIENCE

___ Read Chapter 14, *EPS*
___ Answer questions, p. 76, *EPS*
___ Complete discussion questions
___ Complete reaction-turbine project

❑ READING

___ Read Chapters 30–32, *Around the World in Eighty Days*
___ Answer **Understanding the Story** questions

❑ SPELLING

___ Review spelling words, p. 32, *Spelling*
___ Complete **Proofreading and Writing**, p. 32, *Spelling*
___ Read and discuss **Vocabulary Connection** in the lesson

More time teaching your child,
less time planning

Lesson 23

Materials

Geography Notebook
Science Notebook
small can with the top removed
nail
hammer
long and short strings
Spelling Notebook
Spelling 7 CD (Optional)

Books

Language
Geography
EPS
Around the World in Eighty Days
Spelling

Student Assignments

□ MATHEMATICS

□ GRAMMAR

— Read pp. 475–478, *Language*
— Complete Exercises 12 and 13, pp. 476–479, *Language*
— Complete Review E, pp. 479–480, *Language*

□ GEOGRAPHY

— Read pp. 104–109, *Geography*
— Read pp. 115–122, *Geography*
— Complete Section 1 Assessment, p. 122, *Geography*

□ SCIENCE

— Read Chapter 14, *EPS*
— Answer questions, p. 76, *EPS*
— Complete discussion questions
— Complete reaction-turbine project

□ READING

— Read Chapters 30–32, *Around the World in Eighty Days*
— Answer Understanding the Story questions

□ SPELLING

— Review spelling words, p. 32, *Spelling*
— Complete Proofreading and Writing, p. 32, *Spelling*
— Read and discuss Vocabulary Connection in the lesson

Notes

Mathematics

See Lesson 23 in the separate Math manual.

Grammar

Objective: to practice choosing the correct pronoun that agrees with its antecedent

Introduction: When a pronoun does not agree in number with the noun that is its antecedent, the sentence is not grammatically correct. Although people may say, “Everyone needs their own car,” the correct expression is, “Everyone needs his or her own car.” Since the word *everyone* is considered singular, the pronoun that comes after it must be singular as well.

Instruction: Read and study pp. 475–478 in *Language*, and read the examples aloud, emphasizing the correct pronoun.

Application: Once you are confident that you understand pronoun-antecedent agreement, complete Exercise 12 on pp. 476–477 and Exercise 13 on pp. 478–479. Practice your editing skills by completing Review E on pp. 479–480.

Calvert’s Lesson Manuals provide you with complete, step-by-step daily plans for all subjects, letting you spend more time focusing on your child.

The comprehensive Calvert program and Lesson Manual weave instruction from one subject to the next so that your child will retain the information and build a solid academic foundation on which to layer future studies.

In Seventh Grade, although the Home Teacher is still actively involved, the Lesson Manual directly addresses the student.

Lesson 23, Calvert School

A
see pages
9–10

Lesson 23 from our Seventh Grade course is shown here and on next pages. Wherever other Calvert-published materials are referenced, match the letter in the blue circle [A] to the page(s) indicated.

Notes**Geography**

Objective: to identify landforms found in the United States; to contrast the climates of different areas of the United States

Materials (*Optional*)

magazines
art materials

Introduction: The two chapters of this next unit will introduce you to the geography and peoples of the United States and Canada. The chapters detail the landforms, climate, economy, history, government, and lifestyles found in these countries. Although these two countries have differences, they share the following features: large size and a wealth of resources; varied economies and generally well-to-do people; democratic governments and a high degree of freedom; and an ethnically diverse population.

The United States and Canada share a 5,522-mi (8,887-km) border, the largest continuous border in the world. It is also an undefended border. In several spots, cities on both sides of the border share commerce, trade, and tourism. The two cities named Niagara Falls are one example, and the pair of Great Lakes cities named Sault Ste. Marie is another. The largest pairing, though, is Windsor, in Canada's province of Ontario, and Detroit, in the state of Michigan. The two cities sit on the opposite banks of the Detroit River and enjoy a thriving international trade. Each day thousands of people cross the two bridges and tunnels connecting these cities. Some cross to work in their jobs; others visit the sites of the neighboring city to use it as the launching point for travel in the other country.

To introduce yourself to these two countries, read pp. 104–106 in **Geography**. Then examine the political and physical maps of the United States and Canada on pp. 108–109. You will be using and referring to the rest of the **Regional Atlas** during this and the next five lessons.

Today you will begin your exploration with an investigation of the landforms and climates of the United States.

Instruction: Read pp. 115–122, and take notes in your notebook. Refer to the maps on pp. 110–111 to learn more about food production in the various regions of the United States, and famous landforms. Read **Places to Locate** on p. 115, and relate one fact about each one to your Home Teacher.

You might want to create a chart with three column headings: *Region*, *Winter*, and *Summer*. Write the names of the different physical regions in the first column. Then, as you read the section on climates, take notes on the temperatures and precipitation found in each region in both winter and summer.

Be sure to examine the illustrations and answer the caption questions orally. Also study the maps and answer the questions orally.



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Application: After you have studied and discussed pp. 115–122 with your Home Teacher, complete the **Section 1 Assessment**, p. 122, in your notebook. If time allows, look at the list on pp. 112–113 of U.S. state names, their meanings, and origins. Then determine which ones are related to physical geography.

Enrichment: Select a “natural wonder” of the United States and create an illustrated travel brochure for that place. You can use pictures cut out from magazines and the resources on the Internet to complete this project. Be sure to include a map showing its location.

Science

Objective: to learn about engines

Introduction: Do you remember learning how the invention of the steam engine heralded the beginning of the Industrial Revolution? In this lesson, you will learn about steam engines and turbines. As you have seen in the other chapters in *EPS*, inventions such as these are based on the inventor's understanding of physics.

Instruction: Read carefully *EPS* Chapter 14, and examine all the pictures closely. In your notebook, remember to take notes on the chapter. Try using a concept map or a flow chart to organize the information. Be sure you can answer and explain the following questions.

1. Why is a steam engine in a factory called a stationary steam engine?
2. Why do factories have tall smokestacks?
3. How does a water turbine work?
4. Why is a revolving lawn sprinkler like a reaction turbine?
5. How is a steam turbine similar to a water turbine?
6. How is a windmill something like a turbine?

Application: After you have studied Chapter 14, answer the questions on p. 76, and record your responses in your notebook. Then complete the following project.

Note: The last step in the procedure requires that you be near a sink.

A Reaction Turbine

Procedure

1. Make nail holes about 1/2-in. apart all around the side of the can near the bottom.
2. Holding the can steady, put the nail in each hole, pulling the nail back toward one side of the can until the hole is twisted sidewise. Twist holes in the same direction so the water will be thrown in the same direction.
3. Make one hole on each side of the can near the open top so a short string can be tied on as a handle.

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Notes

4. Tie a long string in the middle of this handle.
5. Hold the long string so the can is under the faucet. Then turn on the water.

Conclusions

Why does the can turn rapidly?

Reading

Read Chapters 30, 31, and 32 of *Around the World in Eighty Days*. In these chapters, an exciting rescue takes place, and the last leg of the trip begins!

Vocabulary

efface
sledge

impassible

indemnify pillage

repugnance

Understanding the Story**Chapter 30**

1. Who rescues Passepartout and the other two travelers from the Sioux?
2. When before had this person said he would rescue someone?
3. What is at risk for Fogg if he takes the time to rescue Passepartout?
4. Because of these rescue situations, what kind of person is Fogg?

Chapter 31

1. Draw a picture of a sledge, using the information given in Chapter 31 and the meaning given in the dictionary. Would you like to travel in a sledge?
2. Try to imagine the trip and the problems that our characters would have encountered. Picture traveling between two towns that you know and list the problems that would arise on the trip. Discuss this with your Home Teacher.
3. How does Passepartout feel about Fogg now?

Chapter 32

1. What do you think is signified by the name the author has chosen for the captain of the *Henrietta*?
2. How much time is left before Fogg has to be in London to win the bet? Check your chart.
3. Discuss where the *Henrietta* is bound. In what country is that area located? Look it up on the map. What product is that area famous for producing?
4. Where does Fogg want the *Henrietta* to take him?
5. How does Fogg convince the captain to take them onboard as passengers?
6. Where does Fogg say he will go?
7. What does the narrator of the story tell you about balloon travel at the time of this story?



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Bsee page
11**Spelling****Notes**

Objective: to proofread for spelling errors and capitalization errors; to integrate spelling and writing in a personal writing response

Introduction: Review the spelling word list that is highlighted in the box at the bottom of p. 32 in *Spelling*. This would be a good time to study any words on that list that you have misspelled in previous practices. Below the **Word List**, you will see a short section labeled **Personal Words**, with two spaces provided. This is a reminder that you can utilize this area to jot down any words you need or want to look up to complete the **Proofreading and Writing** exercises. Next, turn your attention to the focus of today's lesson: **Proofreading and Writing**.

Instruction: Begin the section entitled **Proofread for Capitalization**, by reading about using capital letters in business letters. If you feel you need more of a review on using capital letters, study **Capitalization** in the **Writer's Handbook** on p. 241 of your textbook. Correct the four capitalization errors in **Check Capitalization** on p. 32. Write the corrections in the spaces provided under the illustration.

Next, complete **Proofread a Business Letter**. You will be searching the letter for five misspellings and two capitalization errors. Mark them right on the letter with the proofreader's marks, just as if you were an editor. See **Business Letter Form** on p. 245 of *Spelling* for a reminder of the guidelines for a business letter.

Application: Complete **Write a Business Letter** at the bottom of p. 32. Begin by thinking of places you would like to visit and what types of information you would need to plan a vacation. Remember that your letter must include at least three spelling words and a personal word.

Vocabulary Connection

magazine

A *magazine* is a storehouse! In a warship or a fort, the magazine is the room where the ammunition is stored. The kind of magazine that people read was first thought of as a storehouse of poems, stories, articles, and pictures. The word *magazine* comes from an Arabic word *makhazin* meaning storehouse. The word then made a long journey through Italian and French to get to us.

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Lesson 23

Books
Calvert Math
Practice

Student Assignments

- **MATHEMATICS**
 - Complete Warm-up activity
 - Study lesson and examples, p. 42, *Calvert Math*
 - Complete **Try These**, problems 1-4, p. 43, *Calvert Math*
 - Complete **Exercises**, problems 1-2, 5-6, 8-9, 11-13, and 16, p. 43, *Calvert Math*
 - Work problems 1, 3, 5, 7-9, 11-12, and 14-15, *Practice 22, Practice*

Objectives: to divide decimals

Notes

Warm-up: Complete **Cumulative Review** problems 14-25 on p. 45 of *Calvert Math*.

Skill Development: Study the lesson and examples on p. 42 of *Calvert Math*. When you are dividing a decimal by a whole number, you first place the decimal in the answer directly above the decimal in the dividend. After you have placed the decimal in the quotient, divide. Remember that the answer when you divide is called the *quotient*. The *dividend* is the number inside the division bar, that is, the number being divided. The *divisor* is the number outside the division bar, or the number by which you are dividing.

Decimals are only shown in the quotient. No decimals should be shown in your calculations. If you are asked to round the quotient to a certain place value, calculate the quotient one place further than the place asked for. For example, if you are asked to round to the tenths place, you should divide to the hundredths place. If you need to review rounding decimals, revisit Lesson 15.

Sometimes when you are dividing with decimals, you will need to add zeros to the dividend to continue dividing. Decimals are either *terminating* or *repeating*. As you divide and continue adding zeros to the dividend, pay attention. If you notice when you are dividing that a pattern is repeating, the quotient is a *repeating decimal*. Look at the following examples.

$$18.48 \div 6$$

$$\begin{array}{r} 3.08 \\ 6 \overline{)18.48} \\ \underline{18} \\ 48 \\ \underline{48} \\ 0 \end{array}$$

$$0.71 \div 5$$

$$\begin{array}{r} 0.142 \\ 5 \overline{)0.710} \\ \underline{5} \\ 21 \\ \underline{20} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

$$34.1 \div 9$$

$$\begin{array}{r} 3.7888 \approx 3.78 \\ 9 \overline{)34.1000} \\ \underline{27} \\ 71 \\ \underline{63} \\ 80 \\ \underline{72} \\ 80 \\ \underline{72} \\ 80 \end{array}$$

Turn to p. 43 in *Calvert Math* and complete problems 1-4 in **Try These** and problems 1-2, 5-6, 8-9, 11-13, and 16 in **Exercises** on p. 43.

Practice: Work problems 1, 3, 5, 7-9, 11-12, and 14-15 of **Practice 22** in *Practice*.

Lesson 23, Calvert Math

2.5 Dividing Decimals

Objective: to divide decimals

Melinda is competing in the floor-exercise event at a gymnastics meet. The judges have awarded her scores of 7.8, 8.0, 7.7, 7.6, 8.3, and 8.0, for a total of 47.4. To find the average score, divide 47.4 by 6.

Estimate:
 $48 \div 6 = 8$

Step 1	Step 2	Step 3
Place the decimal point in the quotient as shown. $\begin{array}{r} 7.9 \\ 6 \overline{)47.4} \end{array}$	Divide the ones. $\begin{array}{r} 7 \\ 6 \overline{)47.4} \\ \underline{42} \\ 54 \end{array}$	Divide the tenths. $\begin{array}{r} 7.9 \\ 6 \overline{)47.4} \\ \underline{42} \\ 54 \\ \underline{54} \\ 0 \end{array}$

Melinda's average score is 7.9.

Check by multiplying.

More Examples

Sometimes there is never a remainder of 0. In such cases, the quotient is usually rounded.

A.
$$\begin{array}{r} 0.105 \\ 12 \overline{)1.260} \\ \underline{-12} \\ 60 \\ \underline{-60} \\ 0 \end{array}$$

Attach zeros to the dividend until the remainder is zero.

B. Find $14 \div 3$ to the nearest tenth.
$$\begin{array}{r} 4.66 \\ 3 \overline{)14.00} \\ \underline{12} \\ 20 \\ \underline{18} \\ 20 \end{array}$$

4.66 rounds to 4.7.

To round a quotient to a certain place value, divide one extra place. Then round.

We can also divide a decimal by a decimal.
Divide 37.5 by 1.5.

Step 1

Multiply 1.5 and 37.5 by 10. Why?

$$\begin{array}{l} 1.5 \overline{)37.5} \rightarrow 15 \overline{)375} \\ 1.5 \times 10 = 15 \\ 37.5 \times 10 = 375 \end{array}$$

Step 2

Divide as with whole numbers.

$$\begin{array}{r} 25 \\ 15 \overline{)375} \\ \underline{-30} \\ 75 \\ \underline{-75} \\ 0 \end{array}$$

Estimate:
$$\begin{array}{r} 20 \\ 2 \overline{)40} \end{array}$$

The answer is reasonable, since it is close to the estimate.

Another Example

C.
$$\begin{array}{r} 0.14 \overline{)3.5} \end{array}$$

$$\begin{array}{r} 25 \\ 014 \overline{)350} \\ \underline{-28} \\ 70 \\ \underline{-70} \\ 0 \end{array}$$

To divide by a decimal, multiply the divisor and dividend by a power of 10 so that the divisor is a whole number. Then divide as with whole numbers.

Try These

Copy. Place the decimal point and necessary zeros in the quotient.

1.
$$\begin{array}{r} 42 \\ 2 \overline{)8.4} \end{array}$$

2.
$$\begin{array}{r} 161 \\ 6 \overline{)96.6} \end{array}$$

3.
$$\begin{array}{r} 24 \\ 33 \overline{)79.2} \end{array}$$

4.
$$\begin{array}{r} 20 \\ 5 \overline{)10.2} \end{array}$$

5.
$$\begin{array}{r} 2 \\ 0.7 \overline{)1.4} \end{array}$$

Exercises

Divide.

1.
$$\begin{array}{r} 6 \overline{)1.08} \end{array}$$

2.
$$\begin{array}{r} 9 \overline{)12.6} \end{array}$$

3.
$$\begin{array}{r} 0.8 \overline{)2.4} \end{array}$$

4.
$$\begin{array}{r} 0.04 \overline{)0.092} \end{array}$$

5.
$$\begin{array}{r} 5 \overline{)51.95} \end{array}$$

6.
$$\begin{array}{r} 32 \overline{)52.88} \end{array}$$

7.
$$\begin{array}{r} 0.008 \overline{)0.072} \end{array}$$

8.
$$\begin{array}{r} 2 \overline{)0.01} \end{array}$$

9.
$$\begin{array}{r} 7 \overline{)163.8} \end{array}$$

10.
$$\begin{array}{r} 0.083 \overline{)0.00954} \end{array}$$

11.
$$2.584 \div 8$$

12.
$$1 \div 2$$

13.
$$83.01 \div 43$$

14.
$$132.03 \div 8.1$$

15.
$$896.8 \div 0.16$$

16.
$$6.27 \div 66$$

PRACTICE 22 (continued)

MIXED PRACTICE

Compute.

1.
$$\begin{array}{r} 0.7 \\ \times 6 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 0.07 \\ \times 6 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 13 \\ \times 0.004 \\ \hline \end{array}$$

4.
$$\begin{array}{r} \$4.15 \\ \times 0.03 \\ \hline \end{array}$$

5. $4.3 \times 100 =$

6. $36 \div 1,000 =$

7. $\$51.32 \times 10,000 =$

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PRACTICE 22

Name _____

Dividing Decimals

Place the decimal point and add zeros in the quotient, if necessary:

1.
$$\begin{array}{r} 139 \\ 6 \overline{) 83.4} \end{array}$$

2.
$$\begin{array}{r} 8 \\ 0.42 \overline{) 33.6} \end{array}$$

3.
$$\begin{array}{r} 91 \\ 2 \overline{) 0.182} \end{array}$$

4.
$$\begin{array}{r} 56 \\ 0.16 \overline{) 0.896} \end{array}$$

Divide.

5. $3 \overline{) 1.92}$

6. $0.92 \overline{) 2.944}$

7. $6 \overline{) 304.8}$

8. $7 \overline{) 4.24}$

9. $2 \overline{) 359.6}$

10. $0.02 \overline{) 0.116}$

11. $4 \overline{) 2.28}$

12. $8 \overline{) 1.52}$

13. $0.31 \overline{) 2.945}$

14. $3 \overline{) 512.1}$

15. $12 \overline{) 98.4}$

16. $0.9 \overline{) 72.9}$

17. $0.07 \overline{) 0.294}$

18. $0.5 \overline{) 1.175}$

19. $2.8 \overline{) 43.68}$

20. $0.24 \overline{) 1.488}$

Solve.

21. Eight pears at the grocery store cost \$3.36. How much does one pear cost?

22. Ashley swam six laps of the pool in 3.42 minutes. How long did it take her to swim one lap?

23. How many nickels can Will get for \$9.45?

24. Sara can park her car in a garage for \$0.75 an hour. If she spends \$4.50, how long is she parked?

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SPELLING

Name

Player

2:56

Current Score

9

Best Score

Choose the word that is spelled correctly.

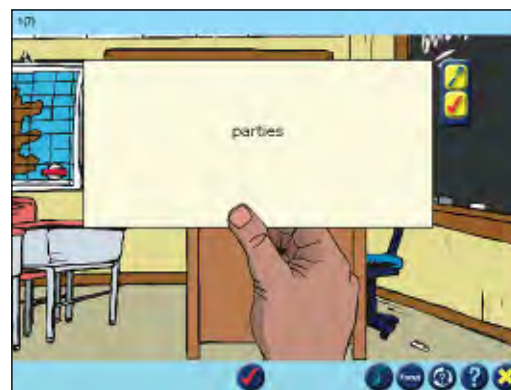
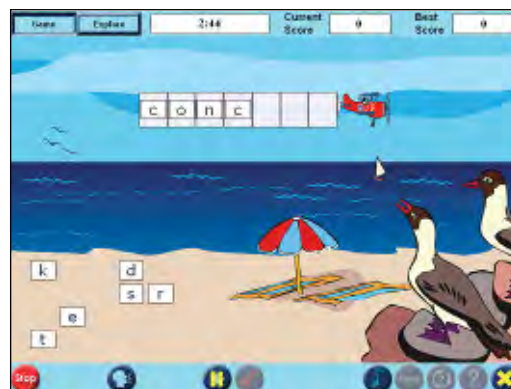
gift

gifet

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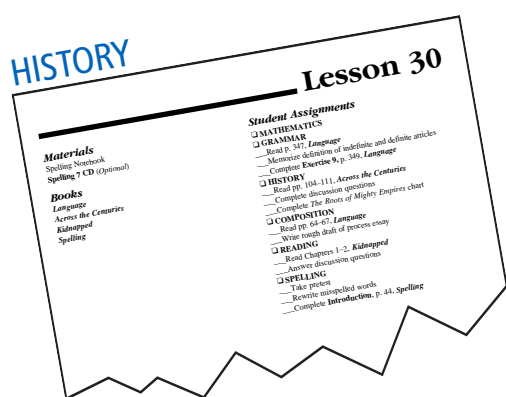
gif

Stop



A Complete Program With No Gaps in Instruction

Our Seventh Grade course is fully integrated—meaning we build the lessons on the principle of subject reinforcement. For example, your student's understanding of historical events will be deepened by studying the geography of the region. Using this approach, each subject complements your student's comprehension of other subjects. To provide your student with a complete education while allowing a flexible schedule that challenges him or her appropriately, we do not cover every subject in every lesson. For example, Lesson 23 does not cover History, Art History, Composition, or Technology, but these subjects are included in other Seventh Grade lessons. Examples of these subjects follow.



Unit 3—Sub-Saharan Africa

Introduction: Today you begin the study of cultures in sub-Saharan Africa. Climate has played a major part in the development and decline of these societies. As in all civilizations, trade also has been a vital factor in their growth. As you read about these new cultures, compare them to those you have studied in the Middle East and Asia. It is important when studying societies throughout history to apply what you have already learned about some to what you observe about others. You will be able to see patterns that apply to all as well as differences due to geographical, economic, and cultural factors.

Begin **Unit 3** with an introduction to **Sub-Saharan Africa** on pp. 104–105. Then study the timeline and photographs with captions on pp. 106–107, outlining **Chapter 5—West Africa**. Note the relative dates of the African societies to those of other cultures you have studied.

Next, read *The Roots of Mighty Empires* on pp. 108–111 and study the climate map of Africa on p. 109. Refer back to this map as you continue to read about the African empires. Note that iron had been in common use in Asia Minor (present-day Turkey) for nearly 1,000 years before it was introduced in Africa. (Similarly, this technology did not spread as far north as Scandinavia until about 50 B.C.)

Key Terms

Sahara savanna sahel
Niger River Jenne-jeno

Key People

Nok

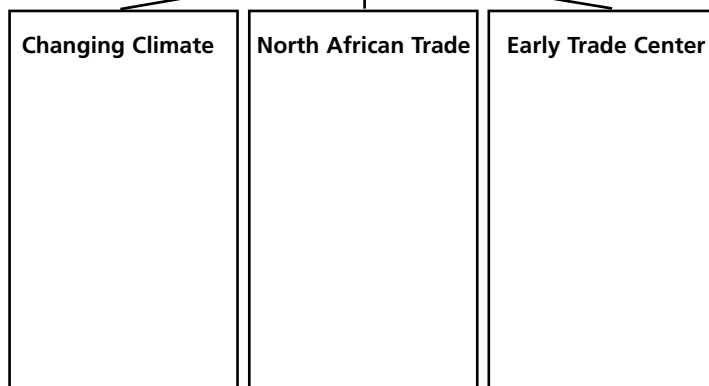
Discussion Questions

1. How has the Sahara changed since 5000 B.C.?
2. How did that change affect where the people of Africa settled?
3. Who were the Nok?
4. Why was Jenne-jeno a good place for a trading community?

Activity: Provide supporting information in each section of the Graphic Organizer that follows.

1. In the section named *Changing Climate*, include the changes that the Sahara underwent after 5000 B.C.
2. Under *North African Trade*, describe the activities centered in the city of Nok.
3. For *Early Trade Center*, include what has been learned about Jenne-jeno.

The Roots of Mighty Empires



Enrichment: Look up the modern nation of Mali. Learn about the area where Jenne-jeno is located. Who lives there now? What is their economy based on? How is the Niger River a factor in their lives? What problems are they facing?

Discoveries in Reading: To complement your study of Sub-Saharan Africa, read Section III, **Civilizations of Africa**, in *Medieval Times to the Enlightenment*

ART HISTORY

Lesson 27

Materials

Portfolio
picture completed in Lesson 17
colored pencils
fine black marker
Spelling Notebook
Spelling 7 CD (Optional)

Books

Language
Architecture
Around the World in Eighty Days
Spelling

Student Assignments

- **MATHMATICS**
 - **GRAMMAR**
 - Read p. 344 and p. 428, *Language*
 - Write five sentences using interrogative and relative pronouns
 - Diagram the subject and verb in each of the sentences you wrote
- **ART HISTORY**
 - Sketch Doric and Ionic columns
 - Read Chapter 6, *Architecture*
 - Examine Map of Italy and surrounding areas, Portfolio
 - Answer discussion questions
- **ART**
 - Describe drawing of Greek temple
- **READING**
 - Read Chapters 36–37, *Around the World in Eighty Days*
 - Answer *Understanding the Story* questions
- **SPELLING**
 - Review spelling list, p. 40, *Spelling*
 - Complete *Think and Practice*, p. 41, *Spelling*
 - Complete *Think and Practice*, p. 41, *Spelling*

The Seventh Grade Art History course focuses on architecture from the oldest in the world to more recent buildings. This course will provide an overview of the history of architecture and will launch students on a lifelong appreciation of this subject. Some of the lessons include an Enrichment activity, which is a Web site location that illustrates the architecture that has been discussed in that lesson. An Art Card Portfolio is included with this course to enhance the learning experience. The art cards feature works of art that give other examples of types of architecture from the various places and periods referenced in the textbook, as well as maps that help associate the art with the geography and history of the time. Some of the art cards give examples of architecture from cultures other than those mentioned in the book.



Objective: to learn about columns and arches made by the Greeks and Romans

Materials (Optional)
world map

Introduction: Make sketches from memory, showing differences between Doric and Ionic columns.

Instruction: Read Chapter 6 in *Architecture*. Find Italy on the map in your Portfolio, and then look for the city of Rome.

This lesson contains many terms that may be new to you. Be sure you understand the meanings of these words: *acanthus*, *composite*, *engaged*, *vault*, *pilaster*.

Read Chapter 6.

Art Card Connection

Map of Italy and surrounding areas

Application: After you have read Chapter 6, answer these questions.

1. How does a Corinthian column differ from an Ionic column?
2. What is the name of the leaves that curl upward and outward on a Corinthian column?
4. The Romans built columns that were composites. What does that mean?
5. What is the name of a column that has a base, no flutings, and no saucer-shaped capital?
6. What is the name of a column that has been flattened against a wall?
7. What two things made it possible for the Romans to roof over large spaces?
8. What building material did the Romans use on their vaults and domes?

Enrichment: Find illustrations and examples of the different styles of Greek columns at http://www.bc.edu/bc_org/avp/cas/fnart/arch/greek_arch.html. Also take note of the University of Virginia architecture by Thomas Jefferson, which you will study later in this course.

Objective: to analyze the techniques used to explain a process

Introduction: The cookbooks in your kitchen, the instructions that come with the board game you received for your birthday, and this textbook all tell you how to do something. They are all examples of process writing. In this lesson, you will analyze the techniques used to explain a process, so that you are able to write your own “how-to” essay.

Instruction: Read pp. 49–54 in *Language*. When you are reading *The Voice in the Attic*, notice the importance of chronological order and transitional words.

Application: Complete **Your Turn 1** on p. 49 and **Your Turn 2** on p. 55.

COMPOSITION

Lesson 25

Materials

Spelling Notebook
Spelling 7 CD (Optional)

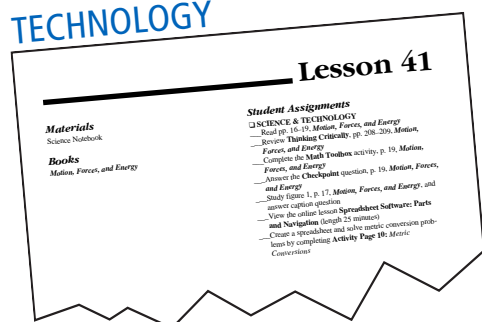
Books

Language
Around the World in Eighty Days
Spelling

Student Assignments

- **MATHMATICS**
 - **GRAMMAR**
 - Read p. 344, *Language*
 - Write 10 sentences using demonstrative pronouns
- **HISTORY**
 - Read *The Golden Age*, pp. 85–92, *Around the World in Eighty Days*
 - Complete discussion questions
- **COMPOSITION**
 - Read pp. 49–54, *Language*
 - Complete *Your Turn 1*, p. 49 and *Your Turn 2*, p. 55
- **READING**
 - Read Chapters 33–35, *Around the World in Eighty Days*
 - Answer *Understanding the Story* questions
- **SPELLING**
 - Review spelling list, p. 40, *Spelling*
 - Complete *Think and Practice*, p. 41, *Spelling*
 - Correct and rewrite misspelled word

TECHNOLOGY



Our Computer Skills and Applications curriculum for Seventh Grade students features a manual that guides you and your child through animated, hands-on lessons delivered over the Internet and accessed through MyCalvert. Students learn about networks, Web searches, desktop publishing, spreadsheets, databases, word processing, and more. The skills acquired in the lessons are then practiced through assignments in other subject areas. As always, we have integrated the instruction so that your student does not learn new skills in isolation but develops an appreciation of how to apply and expand the new skills.

Icons in the Lesson Manual

Throughout the Lesson Manual you will find icons used to alert you to enrichment opportunities.



Discoveries in Reading

The Calvert pennant tells families using the optional Discoveries in Reading enrichment course that this is a good time to read a particular book.

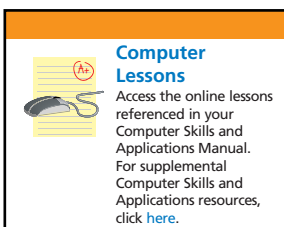


Computer Skills Icons

Computer Skills icons in your Lesson Manual designate lessons into which you will incorporate the Calvert Computer Skills and Applications coursework.

MyCalvert

Your personal Calvert home page contains features and programs relevant to your instruction.



Computer Lessons

Use this icon on your personalized MyCalvert home page to access your Computer Skills and Applications lessons.

Objective: to learn when an object is in motion and how motion is relative to a reference point; to organize data in a spreadsheet; to navigate within a spreadsheet using rows and columns

Key Terms

cell

row

column

Introduction: *EPS* has given you a good background in the laws of physics, so that you can now begin a more formal exploration of physical science. With this lesson, you return to **Motion, Forces, and Energy** and focus on the concept of motion. You will learn that an object is in motion when its distance from another object is changing. Whether an object is moving or not depends on your point of view. For example, a woman riding on a bus is not moving in relation to the seat she is sitting on, but she is moving in relation to the buildings the bus passes.

As you study the text, make sure you list the key terms and their definitions in your notebook and include your observations and conclusions for any experiments that you conduct. Always answer the **Checkpoint** question, and record the answer in your notebook. If you have not done so already, refer to pp. 210–211 for ways in which to organize information in your notes. When you use concept maps and other kinds of graphic organizers, you will find that your understanding of the material will increase.

Another way to organize data is to use a spreadsheet to create tables and charts. Spreadsheets are especially useful for recording data from science experiments. In this lesson, you will use a spreadsheet to organize your answers to the application questions.

As you know, the experiments in the lessons and in **Motion, Forces, and Energy** are optional but are suggested, because we believe you will learn more from them. The textbook also features a project at the beginning of each chapter; each of these projects is an optional activity as well.



Note that your textbook has a companion Web site. Use its resources to extend your understanding of physical science. Go to www.phschool.com and click on the **Science** heading near the top of the Web page. Then click on **Textbook Resources**, select **Science Explorer** using the dropdown menu, and click on **Go**. Under the **STUDENT** heading, click on **Motion, Forces, and Energy**. You will find activities for each chapter in the text.

Instruction: Read and study pp. 16–19 in **Motion, Forces, and Energy**. Include these key terms in your notes: *motion*, *reference point*, *International System of Units (SI)*, and *meter*. Make sure you understand how to convert units. Be sure to spend time on the **Math Toolbox** activity on p. 19 and answer the **Checkpoint** question. You will be using your math skills throughout the rest of the course.

Study figure 1 on p. 17, and answer the questions in the caption. Also review pp. 208–209. As you continue to “think like a scientist” in this course, you will be called on to use these critical thinking skills. If time allows, complete **Try This** on p. 18.



Complete the online lesson **Spreadsheet Software: Parts and Navigation**. Pay attention to the key terms and the processes described.

Note: Beginning with today’s lesson, you will be learning the basics of spreadsheet software programs. The online lesson presents a general model of the tools most spreadsheet software programs will contain but the software depicted is not an actual computer program. You may find that there are slight variations in the appearance of the tools or their functions depending on which specific spreadsheet program you use. Consult the Help menu in your software or the User’s Manual for guidance, if necessary.

Application: When you have finished viewing the online lesson, complete **Activity Page 10: Metric Conversions**, located at the end of this lesson.

Activity Page 10

Metric Conversions

1. Open a spreadsheet software program on your computer.
2. Create a new spreadsheet. In cell A1, type the word *Millimeters*. Adjust the column width so that the entire word is visible in the cell.
3. Type the word *Centimeters* in cell B1, and then type the word *Meters* in cell C1. Adjust the column width of columns B and C so that the entire word is visible in each column.
4. Record the following data in each cell:

20.3 in cell C2

50.7 in cell C3

25.3 in cell C4

1,500 in cell B5

23,400 in cell B6

184 in cell A7

61 in cell A8

5. Use the arrow keys to move from cell to cell.
6. Record the correct conversion in each of the remaining cells. For example, record the number of millimeters in 20.3 meters in cell A2, and the number of centimeters in 20.3 meters in cell B2. Remember the following conversion rules:
 - To convert centimeters to millimeters, multiply the number of centimeters by 10 (or move the decimal point one place to the right). For example, there are 138 mm in 13.8 cm.
 - To convert meters to centimeters, multiply the number of meters by 100, (or move the decimal point two places to the right). For example, there are 120 cm in 1.2 m.
 - To convert millimeters to centimeters, divide the number of millimeters by 10 (or move the decimal point one place to the left; add zeros if necessary). For example, there are 0.2 cm in 2 mm.
 - To convert millimeters to meters, divide the number of millimeters by 1,000 (or move the decimal point three places to the left; add zeros if necessary). For example, there are 0.025 m in 25 mm.
7. Save your spreadsheet before exiting the program so you can use it in Lesson 42.



We Support Your Success: Help is Just a Phone Call Away

The hallmark of the Calvert experience is a high level of personal service, and our Education Counselors are the core of parent and student support.

Calvert's Education Counselors, professional teachers with a thorough knowledge of the Calvert curriculum, offer ongoing support throughout the year. In addition to answering specific curriculum questions, the Education Counselors help you to address any concerns that arise by offering alternative teaching strategies and other practical advice. This reassuring support is available as an included service to all our enrolled families, as well as to families who are considering home schooling with Calvert.

For our families enrolled in the Advisory Teaching Service, our Education Counselors facilitate communication between the ATS teacher and the family.

Our parents value the easy access to and experienced support they receive from our Education Counselors. As an enrolled family, you can look forward with confidence to your Calvert educational experience knowing that you have the day-to-day support of Calvert's Education Counselors.

Questions you might ask one of our Education Counselors

- We are having difficulty establishing a teaching routine. Can you give me suggestions?
- I don't understand how to teach equivalent fractions. Help!
- My child really loves math. How can I enhance his learning?
- Can you give me a few ideas to make geography more interesting for my child?
- My child is a slow worker, and our day is getting longer and longer. Any advice?

How to reach Calvert's Education Counselors

- Toll-free at (888) 487-4652
- By e-mail to edcounselors@calvertservices.org
- Through Live Chat on our Web site at www.calvertschool.org



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Hunt Valley, Maryland 21031
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(888) 487-4652 *toll-free*
(410) 785-3400
(410) 785-3418 *fax*